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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PHAN, TRI H	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/881,110	GHOSH ET AL.	
	Examiner	Art Unit	
	Tri H. Phan	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31 and 34-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,12,13,15-28,30,31 and 34-48* is/are rejected.

7)☐ Claim(s) *10,11,14 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on February 13th, 2006. Claims 32-33 are now canceled. Claims 1-31 and 34-48 are now pending in the application.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 34-35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 10-30 is directed to "machine-readable data structure" embodied in machine-readable medium, e.g. functional descriptive material embodied on a machine readable medium, which is not "computer-readable", see MPEP 2106.IV.B.1(a). Such claimed data structures do not define any structural and functional interrelationships between the data structure, thus consider as non-statutory subject matter, i.e., results in a claim which is not a proper descriptive material's claim and is limited to the practical application to produce a "useful, concrete and tangible" result under 35 U.S.C. 101. In order for a claimed invention to accomplish a practical application, it must produce a "useful, concrete and tangible result" *State Street,* 149 F.3d at 1373, 47 USPQ2d at 1601-02 (see MPEP 2106.II.A). Currently, the claim does not recite a practical application to produce a "useful, concrete and tangible" result, recitation of one or more of the following elements is suggested:

- The manipulation of data that represents a physical object or activity transformed from outside the computer (MPEP 2106 IVB2(b)(i)).
- A physical transformations outside the computer, for example in the form of pre or post computer processing activity (MPEP 2106 IVB2(b)(i)).

A direct recitation of a practical application in the technological arts (MPEP 2106 IVB2(b)(ii)).

See for example *MPEP*, Section 2105-1 and

http://www.uspto.gov/web/offices/com/hearings/software/analysis/ or

http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guideline101_20051026.pdf/ under Section Non-Statutory Subject Matter of the claimed invention complies with 35 U.S.C. § 101.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-4, 16-19, 25-26, and 36-48 are rejected under 35 U.S.C. 102(e) as being anticipated by **Callon, Ross** (U.S.7,035,202; hereinafter refer as '**Callon**').

- In regard to claim 1, **Callon** discloses, *a method for controlling sampling addressed data* (for example see figure 6), *the method comprising*

determining a state of next hop information defining a destination for samples of addressed data (for example see figure 3; col. 6, lines 20-27; col. 8, lines 5-18; wherein the "*state of next hop information*" is defined in the link failure data store and routing table of the router as disclosed in figure 1);

if it is determined that the state of the next hop information is stable, then generating samples from the addressed data, and forwarding the samples based on the next hop information (for example see figure 6; steps 64 and 68 with the decision of step 64 is 'NO'; col. 8, lines 5-18, 24-26; wherein if the available route is found, e.g. the state of the next hop information is "*stable*" or the link is not failed, the router forwards the packet to the selected path based on the destination address in the header of the packet and the information of the routing/forwarding table, e.g. "*generating samples from the addressed data*"); *and*

if it is determined that the state of the next hop information is not stable, then not forwarding samples (for example see figure 6; steps 64 and 62, with the decision of step 64 is 'YES'; col. 8, lines 16-24; wherein if the link is failed, e.g. the state of the next hop information is "*not stable*", the router selects another route until the available route is found for forwarding the packet).

- Regarding claims 3-4 and 25, **Callon** further discloses *wherein the act of not forwarding samples includes suppressing sample generation* (for example see col. 8, lines 16-24; wherein if the link is failed, the router scans and selects another route until the available route is found for forwarding the packet, e.g. "*suppressing sample generation*") *and wherein the*

addressed data are packets ('packets'; for example see col. 8, lines 5-15 where the addresses are defined in the header of the packets).

- In regard to claim 16, **Callon** discloses, *a method for maintaining information used to control sampling of addressed data* (for example see figures 5-6), *the method comprising*

determining a state of next hop information defining a destination for samples of addressed data (for example see figure 3; col. 6, lines 20-27; col. 8, lines 5-18; wherein the "*state of next hop information*" is defined in the link failure data store and routing table of the router as disclosed in figure 1); *and*

if it is determined that the state of the next hop information is unstable (for example see figure 5, step 42; where the received link failure message provides information about link failed, e.g. state of the next hop information is "*unstable*"), *then ensuring that information used to control the sampling of addressed data indicates that the next hop information is unstable* (for example see col. 9, lines 22-28; figure 5, steps 44 and 46; wherein the control unit routes packets through the network, according to the link failure information and the routing information stored in the link failure data store and routing table for avoiding paths using the failed link, e.g. "*ensuring that information ... indicates that the next hop information is unstable*", as specified in col. 3, lines 2-13; col. 4, lines 46-51).

- Regarding claim 17, **Callon** further discloses, *if it is determined that the state of the next hop information is stable, then ensuring that the information used to control the sampling of addressed data indicates that the next hop information is stable* (for example see col. 8, lines 8-

18; where the routing table is analyzed prior to received packets in order to generate the forwarding table and the router scan the link failure for determining the selected route, e.g. "*ensuring that the information ... indicates that the next hop information is stable*").

- In regard to claims 18-19, **Callon** further discloses, *wherein the information used to control the sampling of addressed data includes next hop information and next hop state information and is stored in a hardware register* (for example see figure 3; where the control unit routes packets through the network according to the link failure information, e.g. "*next hop state information*", and routing information, e.g. "*next hop information*", stored in the link failure data store and the routing table as disclosed in col. 2, line 65 through col. 3, line 4).

- Regarding claim 26, **Callon** discloses, *a method for maintaining information used to control sampling of addressed data* (for example see figures 5-6), the method comprising

accepting configured next hop information (for example see step 42 of figure 5 or step 60 of figure 6);

determining next hop interface information from the accepted configured next hop information (for example see step 44 of figure 5 or step 62 of figure 6; col. 8, lines 8-15);

determining a state of the next hop interface information (for example see step 64 of figure 6; col. 8, lines 16-18); and

storing the determined next hop interface information and the state of the next hop interface information (for example see step 46 of figure 5; col. 6, lines 9-11; wherein the link failure information, e.g. "*state of the next hop interface information*", and routing information,

e.g. "*next hop interface information*" are stored in the routing table and the link failure data store of figure 3).

- In regard to claims 36-37, **Callon** discloses, *an apparatus in an addressed data forwarding device* (for example see figure 3) *comprising*

a storage device ('routing table and link failure data store' of the router in figure 3, e.g. "*hardware register*") *for storing next hop information defining how samples generated from addressed data are to be forwarded* (for example see col. 2, lines 67 through col. 3, line 4; col. 8, lines 11-14; where the routing table is analyzed to generate the forwarding table), *and an indicator for indicating a state of the next hop information* (for example see col. 6, lines 42-47; where the link descriptor, e.g. "*indicator*", identifies the failed link, e.g. "*state of the next hop information*", and stores in the data structure as disclosed in col. 3, lines 15-17); *and*

a sampling facility ('router' in figure 3) *for generating samples from the addressed data and for forwarding the generated samples based on the next hop information* (for example see col. 6, lines 20-27; where the control unit of the router selects and forwards packets based on the information of the routing table and link failure data store), *wherein, if the indicator indicates that the state of the next hop information is not stable* ('link failure'), *then the sampling facility will not generate and forward samples* (for example see col. 8, lines 16-21; where the router scans for the another available route if the selected route is failed, e.g. "*not generate and forward samples*").

- Regarding claims 38-39, **Callon** discloses, *an apparatus in an addressed data forwarding device* (for example see figure 3) *comprising*

a storage device ('routing table and link failure data store' of the router in figure 3, e.g. "*hardware register*"); and

a sampling control facility (control unit in the router of figure 3) *for determining a state of next hop information defining a destination for samples of addressed data* (for example see step 44 of figure 5; step 62 of figure 6; col. 7, lines 57-64; where the state of the link is determined for forwarding the packet as disclosed in col. 6, lines 23-27), *and*

storing, in the storage device, an indicator of whether or not the state of next hop information is stable (wherein the link failure information and routing information are stored in the link failure data store and the routing table of figure 3; col. 6, lines 9-11).

- In regard to claims 40-41, **Callon** further discloses, *the sampling facility* (control unit in the router of figure 3) *for generating samples from the addressed data and for forwarding the generated samples based on the next hop information* (for example see col. 6, lines 20-27; where the control unit of the router selects and forwards packets based on the information of the routing table and link failure data store), *wherein, if the indicator indicates that the state of the next hop information is not stable* ('link failure'), *then the sampling facility will not generate and forward samples* (for example see col. 8, lines 16-21; where the router scans for the another available route if the selected route is failed, e.g. "*not generate and forward samples*") and wherein the sampling facility is "*an integrated circuit*" ('programmable processor'; for example see col. 3, lines 6-13).

- Regarding claim 48, **Callon** further discloses, *wherein the samples are network analysis samples* (for example see col. 1, line 66 through col. 2, line 13).

- In regard to claims 42-43, **Callon** discloses, *an addressed data forwarding device* ('router' in figure 3) *comprising*

a first storage device for storing forwarding information ('forwarding table'; for example see col. 8, lines 11-15);

a forwarding facility for forwarding addressed data based on information in the addressed data and based on forwarding information stored in the first storage device ('forwarding engine'; for example see col. 6, lines 13-17);

a second storage device ('routing table and link failure data store' of the router in figure 3, e.g. "*hardware register*") *for storing next hop information defining how samples generated from addressed data are to be forwarded* (for example see col. 2, lines 67 through col. 3, line 4; col. 8, lines 11-14; where the routing table is analyzed to generate the forwarding table), *and an indicator for indicating a state of the next hop information* (for example see col. 6, lines 42-47; where the link descriptor, e.g. "*indicator*", identifies the failed link, e.g. "*state of the next hop information*", and stores in the data structure as disclosed in col. 3, lines 15-17); *and*

a sampling facility ('control unit' in the router of figure 3) *for generating samples from the addressed data forwarded by the forwarding facility and for forwarding the generated samples based on the next hop information* (for example see col. 6, lines 20-27; where the control unit of the router selects and forwards packets based on the information of the routing

table and link failure data store), *wherein, if the indicator indicates that the state of the next hop information is not stable* ('link failure'), *then the sampling facility will not generate and forward samples* (for example see col. 8, lines 16-21; where the router scans for the another available route if the selected route is failed, e.g. "not generate and forward samples").

- Regarding claims 44-45, **Callon** discloses, *an addressed data forwarding device* ('router' in figure 3) *comprising*

a first storage device for storing forwarding information ('forwarding table'; for example see col. 8, lines 11-15);

a forwarding facility for forwarding addressed data based on information in the addressed data and based on forwarding information stored in the first storage device ('forwarding engine'; for example see col. 6, lines 13-17);

a second storage device ('routing table and link failure data store' of the router in figure 3, e.g. "*hardware register*"); and

a sampling control facility (control unit in the router of figure 3) *for determining a state of next hop information defining a destination for samples of addressed data* (for example see step 44 of figure 5; step 62 of figure 6; col. 7, lines 57-64; where the state of the link is determined for forwarding the packet as disclosed in col. 6, lines 23-27), *and storing, in the storage device, an indicator of whether or not the state of next hop information is stable* (wherein the link failure information and routing information are stored in the link failure data store and the routing table of figure 3; col. 6, lines 9-11).

- In regard to claim 46-47, **Callon** further discloses *the addressed data forwarding device of claim 44 further comprising a sampling facility* (control unit in the router of figure 3) *for generating samples from the addressed data and for forwarding the generated samples based on the next hop information* (for example see col. 6, lines 20-27; where the control unit of the router selects and forwards packets based on the information of the routing table and link failure data store), *wherein, if the indicator indicates that the state of the next hop information is not stable* ('link failure'), *then the sampling facility will not generate and forward samples* (for example see col. 8, lines 16-21; where the router scans for the another available route if the selected route is failed, e.g. "*not generate and forward samples*") and wherein the sampling facility is "*an integrated circuit*" ('programmable processor'; for example see col. 3, lines 6-13)..

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2, 5-9, 20-24, 27-28, 30-31 and 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Callon, Ross** (U.S.7,035,202).

- Regarding claim 2, **Callon** discloses all the subject matter of the claimed invention as discussed above for network routing by using link failure information, including *wherein the act*

of not forwarding samples includes suppressing sample generation (for example see col. 8, lines 16-24; wherein if the link is failed, the router scans and selects another route until the available route is found for forwarding the packet, e.g. "*suppressing sample generation*"), but fails to explicitly disclose "*wherein the act of not forwarding samples includes dropping samples generated*". However, it is obvious that, if the link is failed, the decision as dropped or suppressed the forwarding packet is depend on the system engineering choice in writing code for programming process, which is different from system to system.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the "*dropping samples generated*" as the system choice into the **Callon**'s system when the link is failed, with the motivation being to improve routing stability by reducing the convergence time as disclosed in col. 4, lines 17-20.

- In regard to claims 5-9, 20-24 and 27, **Callon** further discloses, *wherein the next hop information includes an index or name associated with an interface* (for example see figure 4; col. 5, lines 10-15; wherein, it is obvious that the links or routes stored in the link failure data store and routing table can be named or index for unique identification, for example, route 12F is the next hop from router 4J in figure 2, e.g. "*name associated with an interface*") *and wherein a link terminated by the interface defines a point-to-point connection with a sample destination device* (for example see figure 2; col. 6, lines 42-47; wherein each link, e.g. "*link terminated by the interface*", is defined between two nodes, e.g. "*point-to-point connection*") *and wherein the next hop information is associated with a next hop destination address* (for example see col. 6,

lines 42-47; wherein, for example, the IP addresses, e.g. "*next hop destination address*", are used to uniquely identify the nodes in the link descriptor, e.g. "*next hop information*").

- Regarding claim 28, **Callon** further discloses, *wherein the next hop interface information is an index or name associated with a logical interface of a router* ('IFC 13' of the router in figure 3).

- In regard to claims 30-31, **Callon** does disclose where the link failure information and routing information are stored in the link failure data store, e.g. "*state of the next hop interface information*", and routing table , e.g. "*next hop interface information*", as specified in figure 3, e.g. "*writing ... into at least one hardware register*"; and the routing table is analyzed in order to generate the forwarding table as disclosed in col. 8, lines 16-21; but fails to explicitly disclose *the state of the next hop interface information uses information in the forwarding table of a router*. However, it is obvious that the link failure information, e.g. "*state of the next hop interface information*", and routing/forwarding information can be stored in the same database structure such as routing/forwarding table as disclosed in col. 2, line 66 through col. 3, line 4; or stored in different tables such as link failure data store, routing table and forwarding table as specified in figure 3; as system engineering choices.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to store the state and routing information in the same table such as routing table, as the system choice, into the **Callon**'s database; with the motivation being to simplify the structure of the database.

- Regarding claim 34-35, **Callon** discloses, *a machine-readable medium having machine-readable data structures stored thereon* (for example see col. 3, lines 14-24), *the machine-readable data structures comprising*

at least one parameter for controlling the sampling of addressed data (for example see col. 3, lines 14-24; wherein the unique identifier for the originator and failed link, valid time, storage time, time stamp, etc. in the data structures; or original ID, instance ID, link descriptor, time stamp/valid/store in the link failure information as disclosed in figure 4 are "*parameter for controlling the sampling of addressed data*");

information identifying a next hop destination of samples of addressed data (for example see col. 6, lines 9-11; where the path vector or failed link is defined by the IP addresses, e.g. source and destination address, as disclosed in col. 6, lines 42-47);

information identifying a state of the information identifying a next hop destination of samples of addressed data (for example see col. 6, lines 38-47; where the instance ID and link descriptor provide information about the failed link, e.g. "*state of the information*"); *and*

a forwarding table, wherein the forwarding table includes a plurality of entries, each of the plurality of entries including the next hop interface ('forwarding table'; for example see col. 6, lines 13-17 where the link between nodes is identified by node addresses as disclosed in col. 5, lines 12-15; col. 6, lines 42-47, e.g. "*next hop address*"; and where the link interface is the link between interface of the nodes, e. g. "*next hop interface*", for example link 8 in figure 2 is the link interface between two nodes 4B and 4D). **Callon** fails to explicitly disclose "*the next hop*

index". However, it is obvious that indexing entries of the table is commonly used in creating table for easy to process such as searching, querying, etc. in the large database.

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to index the entries of the **Callon**'s tables; with the motivation being to order entries in the structure of the database for quick process.

7. Claims 12-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Callon, Ross** (U.S.7,035,202) in view of **Khotimsky et al.** (U.S.6,646,989; hereinafter refer as '**Khotimsky**').

- Regarding claims 12-13 and 15, **Callon** discloses all the subject matter of the claimed invention as discussed above for network routing by using different algorithms as disclosed in col. 1, line 66 through col. 2, line 13; and using information in the link failure data store and routing table for forwarding packet including the manual configure routers, e.g. "*wherein the parameters are user configured*", as specified in col. 9, lines 51-53; but fails to explicitly disclose "*wherein the act of generating samples from the addressed data is performed based on parameters*" and "*counting some parameter of samples forwarded*". However, such implementation is known in the art.

For example, **Khotimsky** discloses the system and method for hop-by-hop routing, *wherein the act of generating samples from the addressed data is performed based on parameters* (for example see col. 15, lines 26-44; wherein the QoS operated with link-state "*parameters*" in mapping graph with different weights) and *wherein the parameters are user*

configured (for example see col. 1, lines 37-52; wherein factors such as network topology and resource, quality of service commitments made to the network users, e.g. "*user configured*"); *counting some parameter of samples forwarded* (for example see col. 4, lines 50-58; where the link configuration or state parameter is used to weight for the cost class).

Thus it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the invention as taught by **Khotimsky**, by providing network topology, quality of service as parameters in mapping graph with different weights into the **Callon**'s routing algorithms, with the motivation being to optimize and improve the hop-by-hop routing with different views of network topology as disclosed in **Khotimsky**: col. 3, lines 21-23.

Response to Amendment/Arguments

8. Applicant's arguments filed on February 13th, 2006 with respect to claims 1-31 and 34-47 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

9. Claims 10-11, 14 and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Choe, Myongsu (U.S.7,031,320) is all cited to show devices and methods for improving the performing and managing routing/forwarding in the telecommunication architectures, which is considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tri H. Phan
May 17, 2006

CHI PHAM
SUPERVISORY PATENT EXAM 5/19/06